

In re Patent Application of
LEONOV
Serial No. 10/728,691
Filed: DECEMBER 5, 2003

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REMARKS

The Examiner is thanked for the thorough examination of the present application. Claims 1-11 have been canceled to advance prosecution and without prejudice to Applicant's right to file a continuation application directed to the subject matter thereof. In addition, Claims 21 and 26-28 have been canceled for consistency with claim amendments to independent Claim 20. Amended independent Claim 20 is former dependent Claim 21 rewritten in independent format, and Claims 22-25 are amended for consistency. New independent Claim 29 is equivalent to former dependent Claim 26 rewritten in independent format, and new Claims 30 and 31 are equivalent to former dependent Claims 27 and 28.

The patentability of the claims is discussed in greater detail below. Favorable reconsideration is respectfully requested.

I. The Claimed Invention

Independent Claim 12, for example, is directed to a counteracting magnetic field generator for a power generator comprising a rotor, and a stator surrounding the rotor and having opposing ends. The stator comprises a stator core and a plurality of windings carried by the stator core creating an undesired axial magnetic field component adjacent the opposing ends of the stator. The counteracting magnetic field generator generates a counteracting magnetic field for counteracting the undesired axial magnetic field component at at least one end of the stator. The counteracting magnetic field generator comprises a first electrically conductive coil

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portion positioned for having an electrical current induced therein by the rotor. The counteracting magnetic field generator also comprises a second electrically conductive coil portion positioned adjacent the at least one end of the stator and connected to the first electrically conductive coil portion to receive the electrical current therefrom to generate the counteracting magnetic field. Amended independent Claim 20 is a method counterpart of Claim 12.

Independent Claim 17 is directed to a power generator that is similar to Claim 12, but the counteracting magnetic field generator comprises an electrically conductive coil portion adjacent an end of the stator. The counteracting magnetic field generator also comprises a power source connected to the electrically conductive coil portion to generate the counteracting magnetic field. New independent Claim 29 is a method counterpart of Claim 17.

II. Claims 12-16, 20, And 22-25 Are Patentable

The Examiner rejected independent Claim 12 and former dependent Claim 21, which is now equivalent to amended independent Claim 20, as unpatentable over the Harrington patent. The Harrington patent discloses a flux shield 5 for the end of a stator core that is connected to an array of coils 8a-8d. The flux shield 5 is an annular member contoured to follow the general configuration of a flange ring 6 and the flux shield 5 forms a path for induced circulating currents as described at column 2, lines 38-51 and as illustrated in FIGS. 2 and 5. In addition, the coils 8a-8d carry circulating currents induced separately from the circulating currents in

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the flux shield 5, but act in the same way as is described at column 3, line 30 through column 4, line 1.

In contrast, independent Claim 12, for example, recites a counteracting magnetic field generator comprising a first electrically conductive coil portion positioned for having an electrical current induced therein by the rotor, and a second electrically conductive coil portion positioned adjacent the end of the stator and connected to the first electrically conductive coil portion to receive the electrical current therefrom to generate the counteracting magnetic field. The Harrington patent fails to disclose such. Instead, the Harrington patent discloses the flux shield 5 as an annular member not a coil, and the coils 8a-8d as carrying circulating currents for canceling stray flux in the end region of the stator separate from the circulating currents of the flux shield 5.

Accordingly, it is submitted that independent Claims 12 and 20 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

III. Claims 17-19 And 29-31 Are Patentable

The Examiner rejected independent Claim 17 and former dependent Claim 26, which is now equivalent to new independent Claim 29, as unpatentable over the Harrington patent in view of the Hovnanian et al. patent. The Harrington patent discloses a flux shield 5 for the end of a stator core that is connected to an array of coils 8a-8d. The flux shield

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5 is an annular member contoured to follow the general configuration of a flange ring 6 and the flux shield 5 forms a path for induced circulating currents as described at column 2, lines 38-51 and as illustrated in FIGS. 2 and 5. In addition, the coils 8a-8d carry circulating currents induced separately from the circulating currents in the flux shield 5, but act in the same way as is described at column 3, line 30 through column 4, line 1.

The Hovnanian et al. patent discloses a vibration producing apparatus or generator comprising a coil for producing a uni-directional flux across an air gap as well as a stray flux field. The apparatus further comprises a compensating coil that is energized by a power source to produce a uni-directional magnetic field, which is opposite in direction of the stray flux field.

The proposed selective combination is improper because the primary reference teaches away from such. For example, the Harrington patent teaches that the circulating currents for canceling stray flux in the end region of the stator are induced separately in the flux shield 5 and the coils 8a-8d. In other words, the proposed selective combination would require the principle of operation of the Harrington patent to change from the circulating currents being induced to generating the circulating currents by a power source.

Accordingly, it is submitted that independent Claims 17 and 29 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing

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features, are also patentable over the prior art and require no further discussion herein.

CONCLUSIONS

In view of the amendments to the claims and the arguments presented above, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 571-273-8300 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this 30th day of December, 2005.

